

REPLACEMENT CLAIMS

Sub D4
C1

8. (twice amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation with a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film; and

subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N₂, O₂, O₃, NO, and N₂O.

Sub I.7
C2

5. (twice amended) The method of claim 8 wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.5.

6. (twice amended) The method of claim 8 wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.8.